

**SATELLITE COMMUNICATION SYSTEM UPLINK POWER CONTROL****ABSTRACT**

A comprehensive system and method for uplink power control in a satellite communication system is provided. The energy of uplink signals received by a satellite from a terminal is compared to an energy threshold. The reference power level of the uplink signals is then adjusted based on the comparison of the received energy with the threshold. Preferably, the energy comparison is accomplished using synchronization bursts. Threshold leveling is then used to determine adjustments to the thresholds used in the energy comparison and the power offsets used in determining the transmission power for uplink signals. If the error rate is derived from the same type of digital coding used for transmitting synchronization bursts, the power threshold is adjusted. If the error rate is derived from a different type of digital coding than is used for transmitting synchronization bursts, a power offset is adjusted.

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